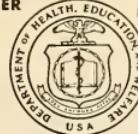


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NATIONAL COMMUNICABLE DISEASE CENTER



Vol. 17, No. 37

WEEKLY
REPORTWeek Ending
September 14, 1968

Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

EPIDEMIOLOGIC NOTES AND REPORTS
OUTBREAK OF ST. LOUIS ENCEPHALITIS
 Southeastern, Illinois

During the first 2 weeks of September 1968, eight elderly persons with clinical encephalitis were hospitalized in Eldorado, Illinois, a town of about 3,600 people in Saline County southeastern Illinois. Preliminary serologic testing has confirmed St. Louis encephalitis in one case in which a diagnostic rise in hemagglutination inhibition (HII) titer from <1:10-1:80 was demonstrated. Acute sera from three other cases have shown HII antibody titers against St. Louis encephalitis, but tests on paired sera are pending. Further serologic tests are in progress. All cases were residents of Eldorado, except for one family

CONTENTS

Epidemiologic Notes and Reports	
Outbreaks of St. Louis Encephalitis —	
Southeastern Illinois	337
Presumptive A2/Hong Kong/68 Influenza —	
Vancouver, Washington	338
Malaria — Baltimore, Maryland	339
Intestinal Parasites	
Intestinal Parasites	339
Smallpox — West and Central Africa	

University of Florida
A 65-year-old resident of the small neighboring town of Batavia had expired on September 10 after a 5-day illness. No etiologic diagnosis was made in that case. Active surveillance efforts have revealed two other clinically suspected cases of encephalitis with onset on September 11 and 14 in Eldorado, 7 miles from Eldorado.

(Continued on page 338)

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES, UNITED STATES
 (Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	37th WEEK ENDING			CUMULATIVE, FIRST 37 WEEKS		
	September 14, 1968	September 16, 1967	MEDIAN 1963 - 1967	1968	1967	MEDIAN 1963 - 1967
Aseptic meningitis	221	131	102	2,575	1,906	1,354
Brucellosis	5	5	5	153	184	184
Diphtheria	13	9	5	132	88	132
Encephalitis, primary:						
Arthropod-borne & unspecified	75	55	—	869	1,139	—
Encephalitis, post-infectious	6	10	—	373	637	—
Hepatitis, serum	89	38	—	3,038	1,518	—
Hepatitis, infectious	1,009	857	617	31,258	27,036	27,679
Malaria	65	47	5	1,575	1,402	71
Measles (rubella)	115	225	425	19,673	57,845	240,213
Meningococcal infections, total	31	16	26	2,031	1,679	2,044
Civilian	29	16	—	1,852	1,566	—
Military	2	—	—	179	113	—
Mumps	644	—	—	125,052	—	—
Poliomyelitis, total	2	—	—	39	26	71
Paralytic	2	—	—	39	22	63
Rubella (German measles)	309	153	—	43,898	39,876	—
Streptococcal sore throat & scarlet fever	4,748	5,348	4,246	305,238	328,822	295,333
Tetanus	5	3	6	111	155	180
Tularemia	4	6	6	142	131	187
Typhoid fever	19	14	16	263	299	297
Typhus, tick-borne (Rky. Mt. spotted fever)	9	12	9	237	262	207
Rabies in animals	61	82	82	2,544	3,212	3,212

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax	3	Rabies in man	—
Botulism	4	Rubella, Congenital Syndrome	5
Leptospirosis	30	Trichinosis	47
Plague	2	Typhus, murine: Tex.-1	22
Psittacosis	35		

OUTBREAK OF ST. LOUIS ENCEPHALITIS - (Continued from front page)

In addition to the occurrence of frank encephalitis, cases of aseptic meningitis have also been reported from this vicinity. Recently three young adults, one in Eldorado and two in the town of Carmi in White County approximately 30 miles from Eldorado, were hospitalized with aseptic meningitis.

Eldorado lies approximately 25 miles south of McLeansborough, Illinois, site of a 1964 outbreak of 19 cases of St. Louis encephalitis (MMWR, Vol. 14, No. 29). Since 1964 continuing virological and ecological investigations in Eldorado have shown activity of St. Louis encephalitis in *Culex pipiens* mosquitoes and certain avian species. On September 13, 1968, 15 pools of *C. pipiens* were collected and are now being processed.

At the present time, intensive surveillance, emphasizing case confirmation and detection of milder clinical syndromes, including aseptic meningitis, febrile headache, and other syndromes possibly due to St. Louis encephalitis virus, is in progress.

(Reported by Allen Kelly, Acting Administrator, Egyptian Health Department; Dr. E. L. Sederlin, Regional Health Officer, Illinois Region V, Chicago, Illinois; Norman J. Rose, M.D., M.P.H., Chief, Bureau of Epidemiology, and Richard Morrissey, M.P.H., Chief, Division of Laboratories, Illinois Department of Public Health; E. I. Pilchard, M.S., Ph.D., D.V.M., Zoonoses Research Center, University of Illinois, Urbana, Illinois; and three EIS Officers.)

PRESUMPTIVE A2/HONG KONG 68 INFLUENZA - Vancouver, Washington

An outbreak of influenza-like disease which occurred during the last 2 weeks of August in seamen aboard a U.S. Merchant Marine Vessel, returning from the Far East, has been diagnosed as presumptive A2 Hong Kong 68 influenza by hemagglutination-inhibition (HI) tests. On September 6, the S.S. Raleigh, docked in Vancouver, Washington, and reported that during the voyage 11 of its 40 crew members had had an influenza-like illness. In the past 3 months, the vessel had made one trip to the Far East, and its only port of call had been Saigon; the ship docked in Saigon on August 12 and left on August 18. One crew member became ill on August 14, two others on August 16, and eventually eight others became ill. The clinical syndrome was typical for influenza-like illness: fever, myalgia, cough, headache, and chills.

On September 6, 1968, 27 crew members including the 11 persons who had been ill were bled and the sera was tested for HI antibodies on September 12 (Table 1). There is a fivefold difference in the geometric mean titer (GMT) against the A2 Hong Kong 68 strain between those with a history of influenza-like disease and those without a history. This difference is significant with $P < 0.01$. Although there is a slightly greater than twofold difference in GMT against A2 Japan 170/62 in these two groups, it is not statistically significant.

(Lawrence O. Berg, Quarantine Inspector, Portland, Oregon; Gordon C. Edwards, M.D., M.P.H., Director, Division of Preventive Medical Services, and Gotlin R. Brandon, M.P.H., Director, Section of Public Health Laboratory, Oregon State Board of Health; Byron J. Francis, M.D., M.P.H.,

Persons With Influenza-like Illness
10 or More Days Prior to Docking

Table 1

Persons With No Influenza-like Illness
During the Voyage

Patient No.	ANTIGENS			Patient No.	ANTIGENS		
	A2, Hong Kong	A2, Jap. 170/62	B, Mass		A2, Hong Kong	A2, Jap. 170/62	B, Mass
6	80	80	10	1	10	10	10
10	10	40	10	2	10	20	10
16	80	10	10	3	10	40	10
17	40	160	20	4	10	160	10
20	80	160	10	5	40	160	10
21	40	80	10	7	10	160	10
22	40	80	20	8	10	10	10
24	80	40	10	9	40	10	10
25	40	80	10	11	80	160	40
26	40	80	10	12	20	320	10
27	320	640	40	13	10	40	80
				14	10	20	10
				15	10	10	10
				18	10	10	10
				19	10	10	10
				23	40	160	10
GMT*	51.46	75.11	7.77	GMT	10.00	33.64	6.77

*Geometric mean titer.

Acting Chief, Division of Epidemiology, Washington State Department of Health; Respiratory Virus Infections Unit, Laboratory Program, NCDC; and an EIS Officer.)

Editorial Note

This investigation illustrates a method for rapid diagnosis of influenza as described by several investigators.^{1,2} Sera from acutely ill and convalescent patients are collected at one time and the same serologic test (HI

or CF) is performed in a single run on the sera in each group. Geometric mean titers are then calculated for the acute and convalescent groups and statistically analyzed. If the difference in GMT is found to be statistically significant, a presumptive diagnosis of influenza can be made.

References:

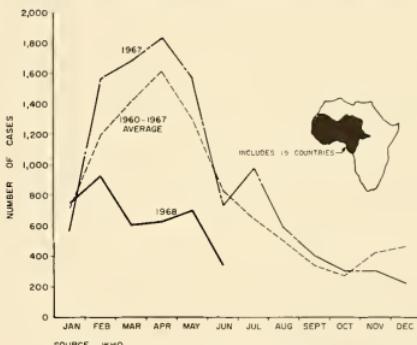
1. Millstone, J.H., et al.: 1954 Influenza B Epidemic in the Pacific Area, Military Surgeon, 1946.
2. Grist, N.R., et al.: Rapid Serological Diagnosis of an Outbreak of Influenza, Brit Med J 2:3249, 1961.

INTERNATIONAL NOTES SMALLPOX — West and Central Africa

As reported to the World Health Organization, smallpox in the 19 countries of West and Central Africa during the first 6 months of 1968 decreased markedly from previous characteristic levels (Figure 1). For the period, the 19 countries reported 3,982 cases of smallpox compared with 7,891 cases reported during the first 6 months of 1967. The average number of reported cases for the first 6 months of the years 1960-67 was 7,108. The characteristic seasonal distribution of smallpox in these countries is an epidemic upsurge during the dry season (early in the year) followed by a gradual decline in cases during the rainy season (generally, May-September) and an eventual seasonal low during the inter-seasonal months (September-November). In 1968, however, peak incidence occurred earlier than usual and reached a level approximately one-half that of the usual peak incidence. These findings are in contrast to experience in the remainder of Africa where reported cases during the first half of 1968 paralleled those reported in 1967.

The changes in the long-term trend of smallpox in West and Central Africa reflect the activities of the West and Central African Smallpox Eradication and Measles Control Program, a collaborative effort of 19 countries which is jointly assisted by USAID and the U.S. Public Health Service and is part of the WHO Global Smallpox Eradication Program. Since its beginning in January 1967, the "attack phase" of the regional eradication drive, with scheduled completion in all but one country by December 1969, has aimed at vaccinating all the population against smallpox and children age 0-4 years against measles. As of September 5, 1968, a total of 55 million vaccinations had been administered in the population of 110,000,000 people. In February 1968 when over 25 million vaccinations had been performed, the first evidence of a substantial change in the long-term trend of smallpox occurred (Figure 1).

Figure 1
REPORTED SMALLPOX CASES BY MONTH, 1960-67
AVERAGE, 1967 AND 1968 WEST AND CENTRAL AFRICA



The reduction of smallpox incidence together with the expected seasonal decrease in smallpox incidence during the current rainy season affords a unique opportunity to interrupt smallpox transmission. During the September-November period, presently infected countries plan to intensify methods of active case detection and outbreak control.

(Reported by the Smallpox Eradication Program, NCDC.)

Editorial Note:

The year of lowest incidence of smallpox in West and Central Africa from 1960-67 was 1964. Although records of smallpox occurrence prior to 1960 are incomplete, 1964 was probably the year of lowest incidence in history. Provisional data suggest that despite known improvements in reporting, the incidence of smallpox in June 1968 is significantly lower than that recorded in June 1964.

EPIDEMIOLOGIC NOTES AND REPORTS MALARIA — Baltimore, Maryland

On April 18, 1968, a Liberian freighter departed from Buchanan, Liberia, bound for Baltimore, Maryland. On May 2 while at sea, the third engineer aboard this vessel, a 27-year-old West German, developed nausea, vomiting,

and bilateral costovertebral angle pain. On May 6, 2 days after arrival in Baltimore, he was hospitalized because of persistence of these symptoms and the development of

(Continued on page 344)

Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
SEPTEMBER 14, 1968 AND SEPTEMBER 16, 1967 (37th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	DIPHTHERIA	ENCEPHALITIS				HEPATITIS			MALARIA
				Primary including unsp. cases		Post- Infectious		Serum	Infectious		
	1968	1967	1968	1967	1968	1967	1968	1968	1967	1968	
UNITED STATES...	221	131	5	13	75	55	6	89	1,009	857	65
NEW ENGLAND...	11	4	-	-	-	-	-	4	49	44	2
Maine...*	-	-	-	-	-	-	-	-	2	1	-
New Hampshire...	-	-	-	-	-	-	-	-	-	-	1
Vermont....	-	-	-	-	-	-	-	-	7	-	-
Massachusetts...	6	2	-	-	-	-	-	1	14	18	-
Rhode Island...	3	1	-	-	-	-	-	-	15	7	-
Connecticut...	2	1	-	-	-	-	-	3	11	18	1
MIDDLE ATLANTIC...	50	11	-	-	11	4	1	20	167	125	9
New York City...	16	6	-	-	2	1	-	14	59	28	3
New York, up-State...	6	-	-	-	1	1	-	2	32	30	1
New Jersey...*	25	4	-	-	3	-	-	3	29	17	2
Pennsylvania...	3	1	-	-	5	2	1	1	47	50	3
EAST NORTH CENTRAL...	60	18	-	-	38	28	1	7	124	108	1
Ohio.....	10	11	-	-	32	23	-	-	22	18	-
Indiana...*	2	-	-	-	-	2	-	-	4	7	-
Illinois...	5	5	-	-	1	2	1	4	40	34	1
Michigan...	43	2	-	-	5	-	-	3	55	37	-
Wisconsin...	-	-	-	-	-	1	-	-	3	12	-
WEST NORTH CENTRAL...	6	1	2	-	-	9	2	2	62	61	6
Minnesota...	2	1	-	-	2	2	-	2	16	13	-
Iowa.....	1	-	2	-	-	5	-	-	6	8	-
Missouri...	-	-	-	-	-	2	-	-	25	26	2
North Dakota...	3	-	-	-	-	-	-	-	1	2	-
South Dakota...	-	-	-	-	-	-	-	-	9	-	-
Nebraska...	-	-	-	-	-	-	-	-	1	1	-
Kansas...	-	-	-	-	-	-	-	-	4	11	4
SOUTH ATLANTIC...	14	42	2	2	7	5	1	2	106	81	27
Delaware...	-	-	-	-	-	-	-	-	9	5	-
Maryland...	9	33	-	-	-	3	-	-	-	21	-
Dist. of Columbia...	-	-	-	-	-	-	-	-	-	3	-
Virginia...	1	2	-	-	2	2	-	-	14	7	-
West Virginia...*	4	7	-	-	1	-	-	-	8	5	-
North Carolina...	-	-	-	-	-	-	-	-	3	11	15
South Carolina...	-	-	-	-	2	-	-	-	8	2	-
Georgia...	-	-	2	1	-	-	-	-	39	16	12
Florida...	-	-	-	1	2	-	1	1	16	11	-
EAST SOUTH CENTRAL...	14	11	1	-	2	-	-	1	56	82	-
Kentucky...	-	6	-	-	-	-	-	-	24	54	-
Tennessee...	13	4	1	-	2	-	-	-	12	13	-
Alabama...	1	-	-	-	-	-	-	1	16	6	-
Mississippi...	-	1	-	-	-	-	-	4	9	-	-
WEST SOUTH CENTRAL...	5	10	-	11	6	2	-	4	52	111	1
Arkansas...	-	-	-	-	-	-	-	-	-	33	1
Louisiana...*	4	2	-	2	2	1	-	2	17	14	-
Oklahoma...	-	5	-	-	3	-	-	-	2	1	-
Texas...	1	3	-	9	1	1	-	2	33	63	-
MOUNTAIN...	3	-	-	-	-	2	-	-	73	29	11
Montana...	-	-	-	-	-	-	-	-	11	4	-
Idaho...	-	-	-	-	-	-	-	1	3	-	-
Wyoming...	-	-	-	-	-	-	-	-	-	-	-
Colorado...	3	-	-	-	-	1	-	-	6	3	11
New Mexico...	-	-	-	-	-	1	-	-	7	3	-
Arizona...	-	-	-	-	-	-	-	-	31	14	-
Utah...	-	-	-	-	-	-	-	-	10	2	-
Nevada...	-	-	-	-	-	-	-	7	-	-	-
PACIFIC...	58	34	-	-	11	5	1	49	320	216	8
Washington...	1	-	-	-	-	2	-	-	36	13	1
Oregon...	-	2	-	-	-	-	-	3	26	20	1
California...	54	26	-	-	11	1	1	46	254	180	5
Alaska...	-	-	-	-	-	2	-	-	2	2	-
Hawaii...	3	6	-	-	-	-	-	-	2	1	1
Fuerto Rico...*	-	-	-	-	-	-	-	-	26	14	-

*Delayed Reports: Diphtheria: La. delete 2
Hepatitis, serum: N.J. 2, Ind. 1
Hepatitis, infectious: Me. 1, N.J. 2, Ind. delete 1, W. Va. delete 1, P.R. 1
Malaria: N.J. 2, La. delete 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
SEPTEMBER 14, 1968 AND SEPTEMBER 16, 1967 (37th WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS	POLIOMYELITIS			RUBELLA	
	Cumulative			Cumulative				Total	Paralytic			
	1968	1968	1967	1968	1968	1967		1968	1968	Cum. 1968	1968	
UNITED STATES...	115	19,673	57,845	31	2,031	1,679	644	2	2	39	309	
NEW ENGLAND.....	7	1,157	846	5	121	68	68	-	-	1	34	
Maine.....	-	37	239	-	6	3	6	-	-	-	1	
New Hampshire.....	-	141	74	-	7	2	2	-	-	-	-	
Vermont.....	-	2	34	-	1	1	6	-	-	-	-	
Massachusetts.....	4	365	347	-	63	32	35	-	-	1	11	
Rhode Island.....	-	5	62	1	9	4	7	-	-	-	3	
Connecticut.....	3	607	90	4	35	26	12	-	-	-	19	
MIDDLE ATLANTIC.....	37	4,091	2,261	5	363	275	51	-	-	-	26	
New York City.....	30	2,110	456	1	73	48	43	-	-	-	16	
New York, Up-State.....	1	1,218	585	-	64	67	NN	-	-	-	9	
New Jersey.....	4	636	487	2	128	93	8	-	-	-	-	
Pennsylvania.....	2	127	733	2	98	67	NN	-	-	-	1	
EAST NORTH CENTRAL.....	18	3,780	5,445	8	245	227	163	-	-	1	127	
Ohio.....	1	294	1,142	-	64	80	4	-	-	-	6	
Indiana.....	1	672	595	5	35	22	14	-	-	-	7	
Illinois.....	4	1,364	977	1	54	54	15	-	-	1	80	
Michigan.....	2	266	932	2	72	55	35	-	-	-	32	
Wisconsin.....	10	1,184	1,799	-	20	16	95	-	-	-	2	
WEST NORTH CENTRAL.....	1	384	2,860	-	108	72	54	-	-	2	16	
Minnesota.....	-	16	134	-	26	18	-	-	-	-	-	
Iowa.....	-	98	749	-	6	14	35	-	-	-	9	
Missouri.....	-	81	333	-	35	15	1	-	-	2	-	
North Dakota.....	1	134	870	-	3	1	17	-	-	-	6	
South Dakota.....	-	4	53	-	5	6	NN	-	-	-	-	
Nebraska.....	-	41	628	-	6	12	1	-	-	-	1	
Kansas.....	-	10	93	-	27	6	-	-	-	-	-	
SOUTH ATLANTIC.....	5	1,507	6,880	7	410	325	38	-	-	1	22	
Delaware.....	-	16	46	-	8	6	2	-	-	-	-	
Maryland.....	-	96	158	2	34	43	13	-	-	-	4	
Dist. of Columbia.....	-	6	22	-	14	10	-	-	-	-	-	
Virginia.....	2	301	2,189	-	35	40	8	-	-	-	-	
West Virginia.....	-	288	1,386	-	11	25	10	-	-	-	9	
North Carolina.....	-	282	849	-	76	67	NN	-	-	1	-	
South Carolina.....	-	12	511	-	56	29	-	-	-	-	1	
Georgia.....	-	4	36	4	85	49	-	-	-	-	-	
Florida.....	3	502	1,683	1	91	56	5	-	-	-	8	
EAST SOUTH CENTRAL.....	-	492	5,196	2	185	129	37	-	-	2	5	
Kentucky.....	-	100	1,331	-	84	35	3	-	-	1	1	
Tennessee.....	-	62	1,872	2	54	55	29	-	-	-	2	
Alabama.....	-	94	1,329	-	26	26	5	-	-	1	2	
Mississippi.....	-	236	664	-	21	13	-	-	-	-	-	
WEST SOUTH CENTRAL.....	21	4,779	17,392	2	305	219	63	1	1	21	14	
Arkansas.....	-	2	1,404	-	20	31	-	-	-	-	-	
Louisiana.....	-	2	155	1	88	86	-	-	-	-	1	
Oklahoma.....	-	117	3,351	-	50	16	2	-	-	2	-	
Texas.....	21	4,658	12,482	1	147	86	61	1	1	19	13	
MOUNTAIN.....	3	982	4,655	2	31	31	69	-	-	-	29	
Montana.....	-	58	282	1	4	1	10	-	-	-	-	
Idaho.....	1	21	384	-	11	3	6	-	-	-	2	
Wyoming.....	-	51	181	-	-	1	-	-	-	-	-	
Colorado.....	-	502	1,561	-	10	13	31	-	-	-	3	
New Mexico.....	-	102	586	-	-	3	5	-	-	-	3	
Arizona.....	2	222	1,018	1	2	4	13	-	-	-	21	
Utah.....	-	21	374	-	1	4	4	-	-	-	-	
Nevada.....	-	5	269	-	3	2	-	-	-	-	-	
PACIFIC.....	23	2,501	12,310	-	263	333	101	1	1	11	36	
Washington.....	5	520	5,431	-	38	29	29	-	-	1	6	
Oregon.....	12	526	1,604	-	21	25	2	-	-	-	12	
California.....	6	1,418	4,964	-	190	265	53	1	1	10	14	
Alaska.....	-	2	140	-	2	10	12	-	-	-	1	
Hawaii.....	-	35	171	-	12	4	5	-	-	-	3	
Puerto Rico.....	4	407	2,112	-	19	12	17	-	-	-	-	

*Delayed reports: Mumps: Ne. 2
Rubella: Ne. 1

Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
SEPTEMBER 14, 1968 AND SEPTEMBER 16, 1967 (37th WEEK) - CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER		TETANUS		TULAREMIA		TYPHOID		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS		
			1968	1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968
UNITED STATES...	4,748	5	111	4	142	19	263	9	237	61	2,544		
NEW ENGLAND...	474	-	2	-	46	-	7	-	1	-	70		
Maine....F.	6	-	-	-	-	-	-	-	-	-	53		
New Hampshire...	8	-	-	-	-	-	1	-	-	-	2		
Vermont...	11	-	-	-	46	-	-	-	-	-	11		
Massachusetts...	61	-	1	-	-	-	3	-	1	-	3		
Rhode Island...	70	-	-	-	-	-	-	-	-	-	-		
Connecticut...	318	-	1	-	-	-	3	-	-	-	1		
MIDDLE ATLANTIC...	159	-	13	-	7	1	21	2	18	3	39		
New York City...	6	-	6	-	-	1	10	-	-	-	-		
New York, Up-State...	151	-	4	-	7	-	4	1	4	3	32		
New Jersey...	NN	-	-	-	-	-	4	-	6	-	-		
Pennsylvania...	2	-	3	-	-	-	3	1	8	-	7		
EAST NORTH CENTRAL...	446	1	10	-	8	7	35	-	8	6	242		
Ohio...	66	-	-	-	1	1	13	-	6	-	86		
Indiana...	87	-	2	-	1	-	3	-	-	1	77		
Illinois...	116	-	5	-	5	6	18	-	2	2	34		
Michigan...	128	-	2	-	1	-	-	-	-	-	12		
Wisconsin...	49	1	1	-	-	-	1	-	-	3	33		
WEST NORTH CENTRAL...	214	-	8	1	13	1	30	2	9	15	624		
Minnesota...	10	-	2	-	-	-	-	-	-	5	190		
Iowa...F.	77	-	3	-	-	-	1	-	1	3	103		
Missouri...	4	-	2	-	7	1	23	2	3	2	90		
North Dakota...	14	-	-	-	-	-	-	-	-	4	102		
South Dakota...	12	-	-	1	3	-	-	1	-	4	79		
Nebraska...	87	-	1	-	-	-	3	-	3	-	25		
Kansas...	10	-	-	-	3	-	2	-	-	1	35		
SOUTH ATLANTIC...	561	1	25	-	9	5	56	2	127	13	290		
Delaware...	5	-	-	-	-	-	-	-	-	-	-		
Maryland...	39	-	3	-	-	-	9	1	14	-	5		
Dist. of Columbia...	4	-	2	-	-	-	-	-	-	-	1		
Virginia...	211	-	4	-	2	-	1	-	42	4	107		
West Virginia...F.	171	-	2	-	-	-	-	-	-	-	34		
North Carolina...	13	-	2	-	2	-	2	-	34	1	11		
South Carolina...	12	1	3	-	-	-	3	-	8	-	-		
Georgia...	14	-	-	-	3	1	14	-	26	5	49		
Florida...	92	-	9	-	2	4	16	-	3	3	83		
EAST SOUTH CENTRAL...	876	-	14	1	8	-	29	2	45	9	549		
Kentucky...	54	-	1	-	1	-	6	-	10	8	278		
Tennessee...	612	-	5	-	5	-	16	2	30	1	248		
Alabama...	111	-	5	-	-	-	-	-	3	-	22		
Mississippi...	99	-	3	1	2	-	7	-	2	-	1		
WEST SOUTH CENTRAL...	383	1	21	1	42	2	32	1	23	9	419		
Arkansas...	-	-	4	-	14	-	5	-	5	1	54		
Louisiana...	-	-	8	-	6	2	5	-	-	1	38		
Oklahoma...	5	-	-	-	8	-	12	1	11	-	117		
Texas...	378	1	9	1	14	-	10	-	7	7	210		
MOUNTAIN...	1,068	-	-	1	7	1	14	-	5	4	71		
Montana...	14	-	-	-	-	-	-	-	-	-	-		
Idaho...	113	-	-	-	-	-	-	-	1	-	-		
Wyoming...	27	-	-	-	1	-	1	-	-	-	3		
Colorado...	568	-	-	-	3	-	2	-	4	-	3		
New Mexico...	157	-	-	-	-	1	7	-	-	2	30		
Arizona...	107	-	-	-	-	-	3	-	-	2	34		
Utah...	82	-	-	1	3	-	-	-	-	-	-		
Nevada...	-	-	-	-	-	-	1	-	-	-	1		
PACIFIC...	567	2	18	-	2	2	41	-	1	2	240		
Washington...	80	-	1	-	-	2	-	-	-	-	2		
Oregon...	72	-	1	-	1	1	5	-	-	-	6		
California...	331	2	16	-	1	1	34	-	1	2	232		
Alaska...	11	-	-	-	-	-	-	-	-	-	-		
Hawaii...	73	-	-	-	-	-	-	-	-	-	-		
Puerto Rico...	3	-	8	-	-	-	2	-	-	-	17		

*Delayed reports: SST: Me. 3, W.Va. delete 18
Tetanus: Iowa 1

Week No.
37

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED SEPTEMBER 14, 1968

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Under 1 year All Causes	Area	All Causes			Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over	Pneumonia and Influenza All Ages			All Ages	65 years and over			
NEW ENGLAND:	711	400	39	34	SOUTH ATLANTIC:	1,228	635	43	69	
Boston, Mass.	225	118	9	12	Atlanta, Ga.	143	66	-	8	
Bridgeport, Conn.	65	33	8	1	Baltimore, Md.	244	127	6	16	
Cambridge, Mass.	24	13	-	-	Charlotte, N. C.	64	29	2	5	
Fall River, Mass.	22	14	-	1	Jacksonville, Fla.	96	43	3	7	
Hartford, Conn.	48	23	4	6	Miami, Fla.	100	57	2	5	
Lowell, Mass.	30	16	3	-	Norfolk, Va.	66	35	-	5	
Lynn, Mass.	10	6	-	-	Richmond, Va.	68	32	4	4	
New Bedford, Mass.	36	24	2	-	Savannah, Ga.	41	21	3	-	
New Haven, Conn.	49	34	2	6	St. Petersburg, Fla.	74	57	7	1	
Providence, R. I.	66	40	6	3	Tampa, Fla.	78	45	6	7	
Somerville, Mass.	9	7	-	-	Washington, D. C.	212	98	7	11	
Springfield, Mass.	47	25	4	-	Wilmingtnon, Del.	42	25	3	-	
Waterbury, Conn.	35	21	-	3						
Worcester, Mass.	45	26	1	2						
MIDDLE ATLANTIC:	3,137	1,764	86	127	EAST SOUTH CENTRAL:	764	378	31	41	
Albany, N. Y.	48	19	1	3	Birmingham, Ala.	122	68	-	11	
Allentown, Pa.	30	16	2	1	Chattanooga, Tenn.	50	32	3	1	
Buffalo, N. Y.	118	63	-	10	Knoxville, Tenn.	34	22	1	1	
Camden, N. J.	38	24	4	-	Louisville, Ky.	165	79	19	8	
Elizabeth, N. J.	18	9	-	-	Memphis, Tenn.	156	73	-	5	
Erie, Pa.	36	22	1	3	Mobile, Ala.	44	13	2	4	
Jersey City, N. J.	69	39	1	1	Montgomery, Ala.	53	25	3	5	
Newark, N. J.	75	36	1	3	Nashville, Tenn.	140	66	3	6	
New York City, N. Y.	1,544	863	39	60	WEST SOUTH CENTRAL:	1,128	594	36	70	
Paterson, N. J.	38	18	-	2	Austin, Tex.	40	25	4	-	
Philadelphia, Pa.	508	291	11	23	Eaton Rouge, La.	37	16	-	2	
Pittsburgh, Pa.	186	94	3	9	Corpus Christi, Tex.	32	19	-	3	
Reading, Pa.	51	32	4	1	Dallas, Tex.	152	72	2	15	
Rochester, N. Y.	119	71	6	6	El Paso, Tex.	56	30	3	4	
Schenectady, N. Y.	33	20	-	-	Fort Worth, Tex.	90	44	3	8	
Scranton, Pa.	35	25	2	1	Houston, Tex.	177	95	4	13	
Syracuse, N. Y.	76	53	2	4	Little Rock, Ark.	60	39	7	1	
Trenton, N. J.	62	38	3	-	New Orleans, La.	151	75	3	8	
Utica, N. Y.	25	16	3	-	Oklahoma City, Okla.	86	44	1	10	
Yonkers, N. Y.	28	15	3	-	San Antonio, Tex.	127	68	2	10	
EAST NORTH CENTRAL:	2,544	1,386	66	142	Shreveport, La.	65	34	3	4	
Akron, Ohio	59	29	-	4	Tulsa, Okla.	57	33	4	2	
Canton, Ohio	34	19	3	1	MOUNTAIN:	439	246	17	40	
Chicago, Ill.	723	402	20	42	Albuquerque, N. Mex.	39	22	4	2	
Cincinnati, Ohio	177	108	4	9	Colorado Springs, Colo.	30	17	-	5	
Cleveland, Ohio	218	114	1	10	Denver, Colo.	134	76	3	10	
Columbus, Ohio	140	62	3	7	Ogden, Utah	20	7	2	2	
Dayton, Ohio	80	40	3	4	Phoenix, Ariz.	100	46	2	11	
Detroit, Mich.	305	162	6	17	Pueblo, Colo.	15	14	-	-	
Evansville, Ind.	39	22	2	1	Salt Lake City, Utah	54	29	4	6	
Flint, Mich.	36	16	-	2	Tucson, Ariz.	47	35	2	4	
Fort Wayne, Ind.	53	22	1	3	PACIFIC:	1,638	1,004	26	55	
Gary, Ind.	20	6	3	3	Berkeley, Calif.	18	14	-	-	
Grand Rapids, Mich.	53	29	2	5	Fresno, Calif.	38	20	1	3	
Indianapolis, Ind.	157	87	4	10	Glendale, Calif.	40	32	1	1	
Madison, Wis.	43	21	3	2	Honolulu, Hawaii	48	19	-	2	
Milwaukee, Wis.	124	83	2	7	Long Beach, Calif.	99	62	1	-	
Peoria, Ill.	38	21	-	8	Los Angeles, Calif.	512	313	9	13	
Rockford, Ill.	40	20	4	1	Oakland, Calif.	86	50	2	4	
South Bend, Ind.	42	26	4	-	Pasadena, Calif.	44	35	1	1	
Toledo, Ohio	100	57	1	4	Portland, Ore.	100	65	1	2	
Youngstown, Ohio	63	40	-	2	Sacramento, Calif.	41	23	1	1	
WEST NORTH CENTRAL:	881	535	21	46	San Diego, Calif.	106	57	3	6	
Des Moines, Iowa	51	36	1	4	San Francisco, Calif.	157	82	1	6	
Duluth, Minn.	31	20	3	3	San Jose, Calif.	35	27	-	1	
Kansas City, Kans.	52	24	4	6	Seattle, Wash.	187	113	3	9	
Kansas City, Mo.	156	100	2	4	Spokane, Wash.	63	49	1	2	
Lincoln, Nebr.	17	12	1	1	Tacoma, Wash.	64	43	1	4	
Minneapolis, Minn.	132	79	1	6	Total	12,470	6,942	365	624	
Omaha, Nebr.	68	44	-	6	CUMULATIVE Totals including reported corrections for previous weeks					
St. Louis, Mo.	234	127	7	12	All Causes, All Ages	-----	472,577			
St. Paul, Minn.	71	50	2	3	All Causes, Age 65 and over	-----	272,595			
Wichita, Kans.	69	43	-	1	Pneumonia and Influenza, All Ages	-----	19,240			
					All Causes, Under 1 Year of Age	-----	22,231			

MALARIA - (Continued from page 339)

oliguria. Physical examination revealed a healthy appearing male with a temperature of 100 F., bilateral costovertebral angle tenderness, and hepatosplenomegaly. Initial laboratory results included a normal urinalysis, a hematocrit of 48 percent, and a white cell count of 7,900; a peripheral blood smear was obtained but not examined. An X-ray of the abdomen revealed calcific densities in the path of the right ureter which led to an initial diagnosis of obstructive uropathy. However, retrograde pyelograms performed several days later, showed that no calcific densities were in the ureter.

On May 7, the BUN was 78 mg percent, and the bilirubin was 1.6 mg percent. On May 8 and 10, the patient experienced spiking temperatures to 103 F. By the afternoon of May 10, the hematocrit had fallen to 33 percent, the bilirubin had increased to 20.3 mg percent, the BUN had risen to 180 mg percent, and the urinalysis showed occult blood. Blood smears obtained at this time revealed a heavy parasitemia with *Plasmodium falciparum*; both trophozoites and gametocytes were present. Chloroquine therapy was immediately instituted, but in less than 18 hours, the patient developed pulmonary edema and died.

An autopsy revealed pulmonary congestion and pulmonary edema, calcific deposits in the ileum, and focal tubular neurosis and hemoglobin casts in the kidneys. The heart was normal. *P. falciparum* parasites were found in the capillaries and small vessels of all organs examined. Postmortem review of the blood smears taken on May 6 revealed the presence of many *P. falciparum* parasites.

The patient probably acquired his malaria infection in Liberia since all previous ports of call had been in nonmalarious areas. None of his 42 crew mates had reported ill prior to arrival in Baltimore. A malaria survey of the crew could not be conducted before the ship's departure for Canada, but officers of the Medical Services Branch of the National Department of Health and Welfare (Ottawa) reported that no illnesses had occurred aboard the ship when she arrived in Canada.

(Reported by J.H. Janney, M.D., M.P.H., Director, Division of Communicable Diseases, Maryland State Department of Health; E.J. Hinman, M.D., Director, USPHS Hospital, Baltimore, Maryland; the Canadian Department of Health and Welfare; and the Foreign Quarantine Program, NCDC; and an EIS Officer.)

Editorial Note:

In the 5½-year period between January 1, 1963, and July 1, 1968, 4,715 cases of malaria, including 18 deaths, were reported to NCDC; 129 of these cases, including five deaths, were merchant seamen. The case fatality ratio for seamen was 14 times that for non-seamen (39.1 deaths per 1,000 cases for seamen versus 2.8 deaths per 1,000 cases for non-seamen). This high fatality ratio in merchant seamen may have occurred because 1) 55 percent of their malaria infections were due to *P. falciparum*, and 2) seamen frequently have their onset of illness at sea where adequate medical care may not be available.

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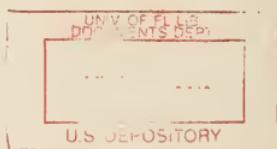
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MORBIDITY AND MORTALITY WEEKLY REPORT

NOTE: THE DATA IN THIS REPORT ARE PROVISIONAL AND ARE BASED ON REPORTS RECEIVED FROM THE NCDC AND FROM STATE HEALTH DEPARTMENTS. THE REPORTING PERIOD CONCLUDES ON SATURDAY; COMPILED DATA ON A NATIONAL BASIS ARE RELEASED ON THE SUCCEEDING FRIDAY.

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